APR 1 7 2008

SUBSTITUTE FOR FORM IPC/SB/08

INFORMATION DISCLOSURE STATEMENT LIST OF DOCUMENTS CITED BY APPLICANT

ATTY DOCKET NO: GOULIAEV=7A

SERIAL NO: 10/539,288

APPLICANT: GOULIAEV, et al.

FILING DATE: June 16, 2005

GROUP:

U.S. PATENT DOCUMENTS (include at least patentee, patent number and issue date)

EXAM. INITIAL	ID	ID DOCUMENT NUMBER				ER		FILING, ISSUE OR PUBLICATION DATE MM-DD-YYYY	PATENTEE OR APPLICANT	Relevant Passage(s)	T.	
	AA	6	4	2	9	3	0	0	Aug. 06, 2002	Kurz, M et al.		
	AB	6	2	0	7	4	4	6	Mar 27, 2001	Szostak, J et al.		
	AC	6	1	4	3	5	0	3	Nov 7, 2000	Baskerville, DS et al.		
	AD	6	6	2	0	5	8	7	Sept 16, 2002	Taussig, MJ et al.		
	AE	AE 20030004122			•	Jan 2, 2003	Beigelman et al.		T			
	AF	6	5	9	3	0	8	8	Jul 15, 2003	Saito, I et al.		
-	AG	5	5	7	1	9	0	3	Nov 5, 1991	Gryaznov,SM et al.		1
	AH	5	4	7	6	9	3	0	Dec 19, 1995	Letsinger, RL et al.		T
	AI	5	6	8	1	9	4	3	Oct 28, 1997	Letsinger, RL et al.		T
*	AJ	5	7	8	0	6	1	3	Jul 14, 1998	Letsinger, RL et al.	-	T
	AK	5	7	4	1	6	4	3	Apr 21, 1998	Gryaznov, SM et al.		
	AL	5	8	3	0	6	5	8	Nov 3, 1998	Gryaznov, SM et al.		T
	AM	5	8	4	3	6	5	0	Dec 1, 1998	Segev, D		十
	AN	5	5	0	3	8	0	5	Apr 2, 1993	Sugarman et al.	_	十
	AO	5	6	3	9	6	0	3	Jun 17, 1997	Dower et al.		十
	AP	5	6	6	5	9	7	5	Sep 9, 1997	Kedar et al.		十
	AQ	5	7	0	8	1	5	3	Jan 13, 1998	Dower et al.		\top
	AR	5	7	7	0	3	5	8	Jun 23, 1998	Dower et al.		十
	AS	5	7	8	9	1	6	2	Aug 4, 1998	Dower et al.		十
	AT	6	0	5	6	9	2	6	May 2, 2000	Sugarman et al.		T
	AU	6	1	4	0	4	9	3	Oct 31, 2000	Dower et al.		十
	AV	6	1	4	3	4	9	7	Nov 2, 2000	Dower et al.		十
	AW	6	1	6	5	7	1	7	Dec 26, 2000	Dower et al.		\top
	AX	6	1	6	5	7	7	8	Dec 26, 2000	Kedar et al.		十
	AY	6	4	1	6	9	4	9	July 9, 2002	Dower et al.		十
·	AZ	5	5	7	3	9	0	5	Nov. 12, 1996	Lerner, RL et al.		T
	BA	5	7	2	3	5	9	8	Mar 3, 1998	Lerner, RL et al.		T
	BB	6	0	6	0	5	9	6	May 9, 2000	Lerner, R et al.		+
	BC	4	8	2	2	7	3	1	Apr. 18, 1989	Watson et al.		+
	BD	 		t		 	├─	 	- : · · ·			+

EXAMINER: Initial if reference considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to

* "Relevant Passages" column is optional. Put check in "T" column if English translation of entire document included. If English language abstract included, put A in this box. If ref. in English, put "E". If requirement otherwise met, put O.

SUBSTITUTE FOR FORM IPC/SB/08 ATTY DOCKET NO: GOULIAEV=7A SERIAL NO: INFORMATION DISCLOSURE STATEMENT LIST 10/539,288 OF DOCUMENTS CITED BY APPLICANT APPLICANT: GOULIAEV, et al. FILING DATE: June 16, 2005 GROUP: U.S. PATENT DOCUMENTS (include at least patentee, patent/pub number and filing/issue/pub date) FILING, ISSUE OR PUBLICATION DOCUMENT NUMBER T* EXAM. PATENTEE OR RELEVANT INITIAL APPLICANT PASSAGE(s) DATE MM-DD-YYYY 6,297,053 Oct. 2, BE 2001 Stemmer Feb. 2, 2005 20050025766 BF Liu et al. Feb. 24, 2005 Liu et al. BG 20050042669 Liu, David R BH 20050042669 Feb. 24, 2005 20050025766 Liu, David R BT Feb. 3, 2005 BJ 2012583054 June 30, 2005 Liu, David R BK 2005170376 Aug. 4, 2005 Liu, David R BL March13, 20030050453 2003 Sorge Joseph A BM 2004185484 Costa Gina L et Sept 23, 2004 al. BN 2003182068 Oct 30, 2002 Battersby, Bronwyn, J. et al. Baldwin et al. BO 6 6 3 0 4 6 Sept 2, 1997 BP 20040197845 Oct 7, 2004 Hassibi, Arjang et al BO 20040191812 Sept 30, 2004 Davydova, Elena, K. et al BR Aug 24, 2004 Southern et al. 8 0 BS 6 Sept. 16, 2003 Chee et al. 2 0 5 θ 4 BT 6 Sept 2, 2003 6 1 3 5 0 8 Ness et al. BU 20030186233 Oct 2, 2003 Chesnut et al. BV 20020115068 Aug 22, 2002 Tomlinsen et al. BW 20020081714 Jun 27, 2002 Jain, Maneesh et al. BX 2 8 5 Sept 11, 2001 Cubicciotti. 6 Roger S. et al. BY 20050170376 Liu, David R et Aug 4, 2005 al. FOREIGN PATENT DOCUMENTS (include at least document number, publication date and country) PUBLICATION PATENTEE OR RELEVANT Т* EXAM. TD APPLICANT COUNTRY CODE & DATE PASSAGE (S) INITIAL DOCUMENT NUMBER MM-DD-YYYY WO/9303172 02-18-1993 E B7. GOLD et al WO/9831700 CA 07-23-1998 SZOSTAK et al E CB WO/0032823 06-08-2000 LOHSE et al Е WO/0047775 08-17-2000 CC SZOSTAK et al E CD WO/9005785 05-31-1990 SCHULTZ Ε DATE CONSIDERED EXAMINER: Initial if reference considered. Draw line through citation if not in

"Relevant Passages" column is optional. Put check in "T" column if English translation entire document included. If English language abstract included, put A in this box. ref. in English, put "E". If requirement otherwise met, put O.

conformance and not considered. Include copy of this form with next communication to

applicant.

of entire document included. If ref. in English, put "E".

SUBSTITUTE FOR FORM IPC/SB/08

ATTY DOCKET NO: GOULIAEV=7A

SERIAL NO:
10/539,288

APPLICANT: GOULIAEV, et al.

FILING DATE: June 16, 2005 | GROUP:

OREIGN PATENT DOCUMENTS (include at least document number, publication date and country)

EXAM. INITIAL	ID	COUNTRY CODE & DOCUMENT NUMBER	DATE MM-DD-YYYY	PATENTEE OR APPLICANT	RELEVANT PASSAGE (S)	т*	
•	CE	EP 0324616	07-19-1989	ROYER et al		Е	
	CF	WO/9635699	11-14-1996		_	E	
•	"	, 200000	11 14 1550	LETSINGER et al		"	
	CG	EP 0695305	02-07-1996	LETSINGER et al		Е	
	СН	WO/0061775	10-19-2000	ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ	 	E	
				SERGEEV			
	CI	EP 0604552	07-06-1994	DOWER et al		E	
	CJ	WO 9512608	05-11-1995			E	
			05 11 1555	SUGARMAN et al	Ŭ j		
_	CK	EP 0773227	05-14-1997	DOWER et al		E	
	CL	EP 0776330	06-04-1997	HOLMES		E	
	CM	EP 0643778	03-22-1995	LERNER et al		E	
	CN	WO/0023458	04-27-2000	HARBURY, et al		E	
•	CO	WO/02074929	09-26-2002	LIU et al		E	
	CP	WO/2004016767	02-26-2004	LIU et al		E	
•	CQ	WO/9856904	12-17-1998	PAYAN		E	
	CR	WO/0100876	01-04-2001	MIRKIN et al.		E	
	CS	WO/9612014	04-25-1996	BRENNER		E	
	CT	WO/02103008	12-27-2002	PEDERSEN et al		E	
	CU	WO/02102820	12-27-2002	PEDERSEN et al		E	
	CV	WO/03078625	09-25-2003	PEDERSEN et al		E	
	CW	WO/2004013070	02-12-2004	PEDERSEN et al		E	
	CX	WO/2004110964	12-23-2004	PEDERSEN et al		E	
	CY	WO/2004024929	03-25-2004	FRANCH et al.		E	
	CZ	WO/2004074501	09-02-2004	FRESKGARD et al		E	
	DA	WO/03078445	09-25-2003	GOULIAEV et al.		E	
	DB	WO/03078626	09-25-2003	GOULIAEV et al		E	
	DC	WO/03078050	09-25-2003	GOULIAEV et al		E	
	DD	WO/03078445	09-25-2003	GOULIAEV et al		E	
	DE	WO/03078627	09-25-2003	GOULIAEV et al	†	E	
	DF	WO/2004074429	09-02-2004	FRESKGARD et al		E	
	DG	WO/2004083427	09-30-2004	FRANCH et al		E	
	DH	WO/2004039825	05-13-2004	FRESKGARD et al	· · · · · · · · · · · · · · · · · · ·	E	
	DI	WO/2004001042	12-31-2003	FRESKGARD et al		E	
	DJ	WO/9951773	10-14-1999	KUIMELIS et al		E	
-02	DK	WO/9609316	03-28-1996	EATON et al		E	
EXAMINER				DATE CONSIDERED			

EXAMINER: Initial if reference considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FOREIGN PATENT DOCUMENTS (include at least document number, publication date and country)

applicant.

* "Relevant Passages" column is optional. Put check in "T" column if English translation of entire document included. If English language abstract included, put A in this box. If ref. in English, put "E". If requirement otherwise met, put O.

INFORMAT	ION D	R FORM IPC/SB/08 ISCLOSURE STATEMENT LIST CITED BY APPLICANT	ATTY DOCKET NO: GOULIAEV=7A SERIAL NO: 10/539,288									
			APPLICANT: GOULIAEV, et al.									
			FILING DATE: June 16, 2005 GROUP:									
EXAM.	ID	COUNTRY CODE &	PUBLICATION	PATENTEE	RELEVANT	Г						
INITIAL		DOCUMENT NUMBER	DATE	OR APPLICANT	Passage (S)	T*						
_	<u> </u>		MM-DD-YYYY			 _						
	DL	WO/0021909	04-20-2000	DILLARD et al		E						
	DM	WO/2004009814	01-29-2004	PEDERSEN et a	11.	E						
···	DO	EP 1533385	05-25-2005	GLAD et al		E						
	 	WO/2005003778 WO/2004099441	01-13-2005	FRESKGARD et	·	E						
	DP	WO/2004099441 WO/03082901	10-09-2003	MOLLER et al.		E						
	 -		04-18-1991	KAWASAKI	•	E						
	DR	WO/9105058 WO/2005058479		MORGAN et al.		E						
	DT	WO/20050584/9 WO/2004099441	06-30-2005	MORGAN et al.		E						
	DU	WO/2004099441	11-18-2004			E						
	DV	DE 19646372	07-13-2000	ALEXANDROV et	aı	+						
	ا کا	DE 19646372	06-19-1997	BIOSYSTEMS GM	IDU	A						
	DW	WO/2005078122	00 25 2005	FRESKAARD et		E						
			08-25-2005			+-						
	DW1	WO/2005/026387	03-24-2005	THISTED, et a	11.	1						
	DY	3'-terminal end to the C ribosome in vitro". FEBS Roberts, RW et al. "RNA-	Lett. 1997 Sep 8	3;414(2):405-8.								
•		peptides and proteins".				97-						
-	DZ	Kurz, M et al. "An effic nucleic acid-encoded pep protocols" Fourth Internation Chemistry (ECSOC-4), www	tide and protein ational Electroni	libraries for i	i <mark>n vitro evolutio</mark> n Synthetic Organ							
	EA	Kurz, M et al. "Psoralen novel template for the r	photo-crosslinke apid and facile p	ed mRNA-puromycoreparation of management	in conjugates: a							
	EB	synthesized from damaged messenger RNA". Science. 1996 Feb										
	EC	amino acids into proteins by ribosome-based synthesis". Trends Biotechnol.										
			b by ribosome bac									
	ED	1994 May; 12(5):158-63 Mendel, D." Site-directe	d mutagenesis wit	ch an expanded o								
	ED	1994 May;12(5):158-63 Mendel, D." Site-directe Rev. Biophys. Biomol. St Liu DR et al. "Engineeri site-specific incorporat	d mutagenesis wit ruc. 1995. 24:463 ng a tRNA and ami ion of unnatural	th an expanded of 3-93 noacyl-tRNA synamino acids int	genetic code". An athetase for the co proteins in							
		1994 May;12(5):158-63 Mendel, D." Site-directer Rev. Biophys. Biomol. Story Liu DR et al. "Engineeri site-specific incorporativo". Proc Natl Acad Scory DR et al. "Progress expanded genetic code".	d mutagenesis wit ruc. 1995. 24:463 ng a tRNA and ami ion of unnatural i U S A. 1997 Sep toward the evolut Proc Natl Acad So	th an expanded of 3-93 noacyl-tRNA synamino acids into 16;94(19):1009 tion of an organici USA. 1999 App	genetic code". And the tase for the co proteins in 92-7. This mith an control of 27;96(9):4780-5	inu .						
	EE	1994 May;12(5):158-63 Mendel, D." Site-directer Rev. Biophys. Biomol. Story Liu DR et al. "Engineeri site-specific incorporat vivo". Proc Natl Acad Scory Liu DR et al. "Progress	d mutagenesis wit ruc. 1995. 24:463 ng a tRNA and ami ion of unnatural i U S A. 1997 Sep toward the evolut Proc Natl Acad So synthesis of RNA	th an expanded of 3-93 Inoacyl-tRNA synamino acids into 16;94(19):1009 ion of an organici USA. 1999 App.	genetic code". And the tase for the co proteins in 92-7. This mith an control of 27;96(9):4780-5	inu .						
EXAMINER	EF EG	1994 May;12(5):158-63 Mendel, D." Site-directer Rev. Biophys. Biomol. Story Liu DR et al. "Engineeri site-specific incorporat vivo". Proc Natl Acad Scory Liu DR et al. "Progress expanded genetic code". Liu, R et al. "Optimized	d mutagenesis wit ruc. 1995. 24:463 ng a tRNA and ami ion of unnatural i U S A. 1997 Sep toward the evolut Proc Natl Acad So synthesis of RNA ods Enzymol. 2000	th an expanded of 3-93 Inoacyl-tRNA synamino acids into 16;94(19):1009 ion of an organici USA. 1999 App.	genetic code". And the tase for the co proteins in 92-7. This mith an control of 27;96(9):4780-5	inu						
EXAMINER EXAMINER	EF EG	1994 May;12(5):158-63 Mendel, D." Site-directer Rev. Biophys. Biomol. Story Liu DR et al. "Engineeri site-specific incorporat vivo". Proc Natl Acad Scory Liu DR et al. "Progress expanded genetic code". Liu, R et al. "Optimized	d mutagenesis with ruc. 1995. 24:463 and a tRNA and amission of unnatural i U S A. 1997 Septoward the evoluth Proc Natl Acad Script Synthesis of RNA ods Enzymol. 2000 DATE	th an expanded of 3-93 Inoacyl-tRNA syramino acids into 16;94(19):1009 into 16;94(19) and 1999 Application of an organication organicat	genetic code". And the tase for the to proteins in 92-7. In this with an to 27;96(9):4780-5 as for in vitro	inu						

SUBSTITUTE FOR FORM IPC/SB/08 INFORMATION DISCLOSURE STATEMENT			ATTY I	OOCKET NO:	GOULIAEV=7A	SERIAL NO: 10/539,288			
LIST OF D	OCUM	ENTS CITED BY							
APPLICANT	•								
			APPLICANT: GOULIAEV, et al.						
			FILING DATE: June 16, 2005 GROUP:						
OTHER DOO		TS (include author, titl				_			
	EH	Wang, L et al. "A new to synthetase pair for the							
•	into proteins" J. Am. Chem. Soc 2000, 122, 5010-5011 Pub 5 April 2000								
	Ellman J.A., et al. "Biosynthetic method for introducing Unnatural Amin acids site specifically into proteins". Methods Enzymol. 202, 301-336 (1992)								
	José Salas et al. "Biosynthetic Polydeoxynucleotides as Direct Template for Polypeptide Synthesis". J. of Biological Chemistry, vol.243, No. 6, 1968, p. 1012-1015 Walder JA, Walder RY, Heller MJ, Freier SM, Letsinger RL, Klotz IM. "Complementary carrier peptide synthesis: general strategy and implications for prebiotic origin of peptide synthesis". Proc Natl Acad Sci U S A. 1979 Jan; 76(1):51-5.								
	EL	Bruick et al. "Template-directed ligation of peptides to							
	EM	Tamura K, Schimmel P. "Oligonucleotide-directed peptide synthesis in a ribosome- and ribozyme-free system". Proc Natl Acad Sci U S A. 2001 Feb 13;98(4):1393-7.							
	EN	Lewis RJ, Hanawalt PC. "Ligation of oligonucleotides by pyrimidine dimersa missing 'link' in the origin of life?", Nature, 22;298(5872):393-6.							
	EO		Liu J, Taylor JS. "Template-directed photoligation of oligodeoxyribonucleotides via 4-thiothymidine". Nucleic Acids Res. 1998						
	EP	Fujimoto et al. "Templa deoxyoligonucleotides of 5646-5647							
	EQ	Kenzo Fujimoto, Shigeo Saito "Template-directo vinyldeoxycytidine". TETRAHEDRON LETTERS 200	ed reve	rsible phot	cocircularizatio				
	TETRAHEDRON LETTERS 2000 , 41:33:6451-6454 Kenzo Fujimoto, Naoki Ogawa, Masayuki Hayashi, Shigeo Matsuda & Isao ER Saito, "Template directed photochemical synthesis of branched oligodeoxynucleotides via 5-carboxyvinyldeoxyuridine". Tetrahedron Letters 2000, 41:49:9437-40								
	ES	Gryaznov et al. "Chemic and absence of a templa	ate". Ĵ	. Amer. Che	em. Soc. 1993, 1	15, 3808-9.			
	ET	Gryaznov SM, Letsinger recombination of oligon	RL. "T nucleot	emplate con ide blocks	ntrolled couplin containing thio	g and			
	EU	groups". Nucleic Acids Res. 1993 Mar 25;21(6):1403-8 Gryaznov SM, Schultz R, Chaturvedi SK, Letsinger RL. "Enhancement of selectivity in recognition of nucleic acids via chemical autoligation". Nucleic Acids Res. 1994 Jun 25;22(12):2366-9.							
	EV	Herrlein MK, Letsinger stranded DNA template"	RL. "S	elective cl	nemical autoliga				
	EW	Letsinger, RL; Wu, T; I of oligonucleotide bloo (1997)							
EXAMINER				DATE CONS	IDERED				
EXAMINER:									

applicant.

		FOR FORM IPC/SB/08	ATTY I	OCKET NO:	GOULIA	EV=7A	SERIAL NO:			
	OF DO	N DISCLOSURE STATEMENT CUMENTS CITED BY					10/539,288			
			ADDT.TC	יאאיי. כחווו	TARW et	al				
APPLICANT: GOULIAEV, et al. FILING DATE: June 16, 2005 GROUP:										
	OTHER DOCUMENTS (include author, title, name of publication, volume, pages and date of publication)									
	EX	Visscher J, Schwartz AW "Template-directed synthesis of acyclic oligonucleotide analogues". J Mol Evol. 1988 Dec-1989 Feb;28(1-2):3-6.								
	EY	Visscher J, Bakker CG, van der Woerd R, Schwartz AW "Template-directed								
		oligomerization catalyzed by a polynucleotide analog". Science. 1989 Apr 21;244(4902):329-31.								
	EZ	Visscher J, van der Woerd deoxynucleoside-bisphosph								
		Life Evol Biosph. 1989;19	(1):3-6							
	FA	Zhan, ZJ and Lynn, DG "Ch synthesis". J. Am. Chem.	Soc. 19	97, 119,	12420-1					
	FB	Bruick RK, Koppitz M, Joy constructing 5'-amino-ter								
		Nucleic Acids Res". 1997	Mar 15;	25(6):130	9-10					
	FC	Albagli, D; Atta, RVA; Ch amplification (CHAMP) by								
		based system" J. Am. Chem								
		July 1999.	1 - 1							
	FD	Xu, Y and Kool, E "Rapid and Selective selenium-mediated autoligation of DNA strands" J. Am. Chem. Soc. 2000, 122, 9040-1 Pub. on web 08/31/2000.								
	FE	Xu Y, Karalkar NB, Kool E detection of RNA and DNA	T. "Non	enzymatic	autolig	ation in	direct three-color			
-		Feb; 19(2):148-52.	borne "	ucacions"	. Nat Bi	otecnioi.	2001			
	FF	Li X, Zhan ZY, Knipe R, L Soc. 2002 Feb 6;124(5):74		"DNA-cat	alyzed p	olymeriza	tion". J Am Chem			
-	FG	Czlapinski, JL and Sheppa	rd, TL.							
	"	metallosalen-DNA conjugat published on the web 08/1		Am Chem S	oc. 2001	Sep 5;12	23 (35) :8618-9			
		Leitzel JC, Lynn DG "Temp	late-di							
	FH	versatile templates". Che 2001.	m Rec.	2001;1(1)	:53-62.	Published	online 30 Jan			
	FI	Schmidt JG, Nielsen PE, O acids to RNA by template-								
	L.	1;25(23):4797-802.								
	FJ	DOWER, WJ et al. "In vitr evolution of proteins and								
		2002, 6:390-398.			_					
	FK	Brenner, S and Lerner, RA Acad. Sci. USA. Vol 89, p				ı chemist	ry" Proc. Natl.			
	E T	Gartner, Z; Liu, DR "The for evolving non-natural	general	ity of DN	A-templa					
	FL	18;123(28):6961-3.								
	FM	Gartner, et al., "Expandin Angew". Chem. Int. Ed. 20								
	F FFI	2002.								
	FN	Gartner, ZJ et al. "Multi templates". J. AM. CHEM.								
EXAMINER DATE CONSIDERED										

EXAMINER: Initial if reference considered. Draw line through citation if not in conformance <u>and</u> not considered. Include copy of this form with next communication to applicant.

SUBSTITUTE FOR FORM IPC/SB/08 SERIAL NO: ATTY DOCKET NO: GOULIAEV=7A INFORMATION DISCLOSURE STATEMENT 10/539,288 LIST OF DOCUMENTS CITED BY APPLICANT APPLICANT: GOULIAEV, et al. FILING DATE: June 16, 2005 GROUP: OTHER DOCUMENTS (include author, title, name of publication, volume, pages and date of publication) Calderone, CT et al. "Directing otherwise incompatible reactions in a single FO solution by using DNA-templated organic synthesis". Angew Chem Int Ed, 2002, 41, No. 21. 4104-4108. Bittker, JA; Phillips, KJ and Liu, DR "Recent advances in the in vitro evolution of nucleic acids". Curr Opin Chem Biol. 2002 Jun;6(3):367-74. Review. Pub. on the web 20th March 2002. FP Summerer, D and Marx, A "DNA-templated synthesis: more versatile than FQ expected". Angew Chem Int Ed Engl. 2002 Jan 4;41(1):89-90. Review Gartner, ZJ et al. "Two enabling architectures for DNA-templated organic synthesis ". Angew. Chem Int. Ed. 2003, 42, No. 12, 1370-1375. Rosenbaum, DM et al. "Efficient and sequence-specific DNA-templated FR polymerization of peptide nucleic acid aldehydes". J. AM. CHEM. SOC. Vol. 125, No. 46, 2003, 13924-13925. Li, X et al. "Stereoselectivity in DNA-templated organic synthesis and its origins". J. AM. CHEM. SOC. Vol. 125, No. 34, 2003, 10188-10189. FS Gordon, EM et al. "Applications of combinatorial technologies to drug discovery. 2. Combinatorial organic synthesis, library screening strategies, FU and future directions". Journal of Medicinal Chemistry, Vol. 37, No. 10, May 13, 1994. Otto, S et al. S"Recent developments in dynamic combinatorial chemistry". FV Current opinion in Chemical Biology 2002, 6: 321-327. Pavia, MR. "The Chemical generation of molecular diversity". http://www.netsci.org/Science/Combichem/feature01.html [Date accessed 11-02-FW 2004] Braun, E, et al. "DNA-templated assembly and electrode attachment of a conducting silver wire". Nature, Vol. 391, 19 February 1998, 775-778. FX Tanaka, K et al. "Synthesis of a novel nucleoside for alternative DNA base FY pairing through metal complexation" J. Org. Chem. 1999, 64, 5002-5003. Beger, M et al. "Universal bases for hybridization, replication and chain FZtermination", Nucleic acids research, 1 Aug. 2000, vol. 28, no. 15, pub., p2911-2914. Weizman, H et al. "2,2'-Bipyridine ligandoside: a novel building block for GA modifying DNA with intra-duplex metal complexes". J. Am. Chem. Soc. 2001, 123, 3375-3376. Frutos, AG et al. "Demonstration of a word design strategy for DNA computing GB on surfaces". Nucleic Acids Research, 1997, Vol. 25, No. 23, 4748-4757. Loweth, CJ et al. "DNA-based assembly of gold nanocrystals". Angew. Chem. GC Int. Ed. 1999, 38, No. 12. 1808-1812. Elghanian, R et al. "Selective colorimetric detection of polynucleotides GD based on the distance-dependent optical properties of gold nanoparticles". Science, Vol. 277, 22 August 1997,. Storhoff, JJ and Mirkin, CA. "Programmed Materials Synthesis with DNA". Chem Rev. 1999 Jul 14;99(7):1849-1862. Mirkin CA. "Programming the assembly of two- and three-dimensional architectures with DNA and nanoscale inorganic building blocks". Inorg Chem. 2000 May 29;39(11):2258-72. Waybright SM, Singleton CP, Wachter K, Murphy CJ, Bunz UH. "Oligonucleotidedirected assembly of materials: defined oligomers". J Am Chem Soc. 2001 Mar 7;123(9):1828-33. Pub. on web 02/07/2001. GG EXAMINER DATE CONSIDERED EXAMINER: Initial if reference considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to

applicant.

SUBST	TUTE	FOR FORM IPC/SB/08						
			ATTY I	OCKET NO: GOULIAEV=7A	SERIAL NO:			
INFORM	OITAN	N DISCLOSURE STATEMENT			10/539,288			
	-	CUMENTS CITED BY						
APPLIC	CANT							
			APPLICANT: GOULIAEV, et al.					
			FILING DATE: June 16, 2005 GROUP:					
ОТИКР	DOCIII	MENTS (include author, titl	le. name	of publication, volume	nage and date of			
public			LC, man	or publication, volume,	pages and date or			
<u> </u>			cker, M	arkus, "DNA-guided assembl	v of proteins as a			
	GH	pathway to an assembler"		, ,	,			
		(http://www.wadsworth.org	/albcon	97/abstract/krummena.htm)	[Date accessed 04-			
		27-2004]						
_ •				olecular Motors and Nanoma				
	a-			an approach to nonpeptide				
	GI	August 1993.	. Nati.	Acad. Sci, USA, Vol. 90,	pp. 6909-6913,			
			tic met	hods for the implementation	on of encoded			
	GJ	combinatorial chemistry".	J. Am.	Chem. Soc. 1993, 115, 981	2-9813.			
				nthetic chemical libraries				
	GK	molecular tags". Proc. Na		d, Sci, USA, Vol. 90, pp.				
		1993, Chemistry.						
		Zuckermann, RN et al. "Di	scovery	of nanomolar ligands for	7-transmembrane G-			
	GL			diverse N-(substituted) g	glycine peptoid			
		library". J. Med. Chem. 1		tructure and stability of	a hagkhona			
	GM			ations for avoiding produc				
	614			hesis". J. Am. Chem. Soc.				
		3031	7		,,			
		Luther, A et al. "Surface	-promot	ed replication and exponer	tial amplification			
	GN			vember 1998, Vol. 396, 245				
				DNA-Binding Compounds via	Multistage			
	GO	Molecular Evolution". Tet						
	GP			plification in a dynamic o actions". Chem. Commun., 2				
	GP			ration and screening of a				
	GO			ry against concanavalin A"				
	~~	2000, 1, 41-48.	.0 11210	if against concanavalin ii				
		Cousins, GRL et al. "Identification and Isolation of a Receptor for N-Methy						
	GR	Alkylammonium Salts: Mole	cular A	mplification in a Pseudo-p	peptide Dynamic			
				hem. Int. Ed., 2001, 40, N				
				selection, amplification				
	GS	pseudo-peptide receptor b Chem. Commun., 2002, 938-		mobilised N-methyl ammoniu	ии топ сепртасе".			
	 			ive in vitro selections for	or DNA-linked			
	GT			rotein binding affinity ar				
L		AM. CHEM. SOC, September	16, 200	3.				
				overy enabled by DNA-templ	ated synthesis and			
	GÜ	in vitro selection" Natur						
				: Try'em all, see what wor				
	GV			ptember 2004, Vol. 305, So				
	GW			. LXXXII, No. 5, R. Grubin NA Templated Synthesis for				
	"	Library", p10-14	.i.a Oii L	MA Templaced Synchesis 101	. Small Polecule			
			ed tube	format for amplification	and detection of			
	GX			ucleic Acids Research, 199				
	<u> </u>	12, p2516-2521						
PUNIT	MED -		•	DATE CONCERNO				
EXAMI	NEK			DATE CONSIDERED				

EXAMINER: Initial if reference considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

SIIB CT.	שיייויייייייייייייייייייייייייייייייייי	FOR FORM IPC/SB/08	T							
			ATTY I	OCKET NO:	GOULIAEV=7A	SERIAL NO:				
INFOR	OITAN	N DISCLOSURE STATEMENT	· -			10/539,288				
		CUMENTS CITED BY				' ' '				
APPLI	CANT									
			ADDITION ON TABLE							
			APPLICANT: GOULIAEV, et al.							
			FILING DATE: June 16, 2005 GROUP:							
		MENTS (include author, tit)	le, name	e of public	cation, volume,	pages and date of				
public	catio									
	GY	Chan et al., "Intra-tRNA								
٠		dependent tRNA unwinding during priming of HIV reverse transcription", PNA Vol. 96, p459-464, January 1999.								
		Liu DR, Gartner ZJ, Kanan			DMA tompleted					
	GZ	basis for the evolution o				synthesis as a				
•	92	ABSTRACTS OF PAPERS OF TH				612-ORGN Part				
		2, MAR 2003		C/M(C//L///120	5001111, 225.	orz orda , rare				
		Rodriguez et al., "Templa	te-dire	cted exten	sion of a quanos	sine 5'-phosphate				
	HA	covalently attached to an								
		33:477-482	_		_					
		Inoue et al, "Oligomeriza				2-methylimidazolide				
	HB	on Poly(C), J. Mol. Biol.	(1982)	, 162, 201	-217					
	,,,,	Chen et al., C. B., "Temp								
	HC	Polydeoxycytidylate templ H. Rembold et al., "Singl	ates" J	. MOI. Blo	of Poly(G) act a	s templates for				
	HD	loligo(C) synthesis"		u regions	or Pory (G) acc a	is templates for				
	1110	J. Mol. Evol. 1994, 38,								
	HE	T. Inoue et al., "A nonen p859-862	zymatic	RNA polym	erase model", So	clence 1983, 219,				
	ne.	O. L. Acevedo et al., "No	n-engim	atic trans	cription of an o	ligoruglectide 14				
	HF	residues long", J. Mol. B				origonacieociae 14				
		C. Böhler et al., "Templat				oligonucleotides",				
	HG	Nature 1995, 376, 578-58		,						
		Acevedo et al., "Template				on on				
	нн	hydroxylapatite", Nature								
		Piccirilli, "RNA seeks it	s maker	", Nature,	17 August 1995,	vol. 376, p548-				
	HI	Schwartz, A. W. et al., "		a di						
	нJ	like structures", Science				over, nucleic acid-				
		Halpin et al.: DNA displa				esis on unprotected				
	нк	DNA.	7	Joela Pilas	o organico bynome	on unproceed				
		PLoS Biol. 2004 Jul;2(7):	E175. E	pub 2004 J	un 22.					
		Halpin et al.: DNA displa				nbinatorial				
	HL	chemistry libraries for s								
	 	PLOS Biol. 2004 Jul;2(7):	E174. E	pub 2004 J	un 22, pp.1022-1	DNA populations				
	HM	Halpin et al.: DNA displa PLoS Biol. 2004 Jul;2(7):	E173. E	pub 2004 J	un 22	DIM POPULACIONS.				
	 	Doyon, J. B.; Snyder, T.								
	HN	Selections for DNA-Linked	Synthe	tic Small	Molecules with I	Protein Binding				
		Affinity and Specificity"	J. Am.	Chem. Soc	. 125, 12372-123	373 (2003).				
		Li, X.; Gartner, Z. J.; T	se, B.	N.; Liu, D	. R., "Translati	on of DNA into				
	но	Synthetic N-Acyloxazolidi	nes", J	. Am. Chem	. Soc. 126, 5090)-5092 (2004).				
		Li, X.; Liu, D. R. ,"DNA-	Templa+	ed Organia	Synthesis: N-+-	rele Strategy for				
	HP	Controlling Chemical Reac								
	1	Chem. Int. Ed. 43, 4848-4			=7c.roote	, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
	î –	Gartner, Z. J.; Tse, B. N			oyon, J. B.; Sny	der, T. M.; Liu,				
	HQ	D. R., "DNA-Templated Org	anic Sy	nthesis an	d Selection of a					
	<u> </u>	Macrocycles", Science 305	, 1601-	1605 (2004).					
EXAMI	MRP			DATE CONS	תפספת					
BARMI	, DK			DAIR CONS	TUEKEU					
EXAMI		Initial if reference cons	idered.	Draw line	e through citati	on if not in				
		e <u>and</u> not considered. Inc	lude co	py of this	form with next	communication to				
appli	cant.	applicant.								

SUBSTITUTE FOR FORM IPC/SB/08 ATTY DOCKET NO: GOULIAEV=7A SERIAL NO: 10/539,288 INFORMATION DISCLOSURE STATEMENT LIST OF DOCUMENTS CITED BY APPLICANT APPLICANT: GOULIAEV, et al. FILING DATE: June 16, 2005 GROUP: OTHER DOCUMENTS (include author, title, name of publication, volume, pages and date of publication) Calderone, C. T. and Liu, D. R., "Nucleic Acid-Templated Synthesis as a Model System for Ancient Translation", Curr. Opin. Chem. Biol. 8, 645-653 Sakurai, K.; Snyder, T. M.; Liu, D. R., "DNA-Templated Functional Group Transformations Enable Sequence-Programmed Synthesis Using Small-Molecule Reagents", J. Am. Chem. Soc. 127, 1660-1661 (2005). HS David R. Liu, "Translating DNA into synthetic Molecules", PLoS Biology, July HT 2004, Vol 2, Iss. 7, p905-6. David R. Liu, "The Development of Amplifiable and Evolvable Unnatural Molecules", Harvard Univ. Cambridge MA Dept of Chemistry and Chemical Biology, Report dated 4 Aug 2003 No. A104614. HU Website of Prof. David R. Liu, publicly available 11 March 2000, http://web.archive.org/web/20000311112631/http://evolve.harvard.edu/, date HV accessed 01-03-2005. Website of Prof. David R. Liu, publicly available 15 Oct 2000, HW http://web.archive.org/web/20001015144553/http://evolve.harvard.edu/, date accessed 07-03-2005. Website of Prof. David R. Liu, publicly available 1 March 2001, http://web.archive.org/web/20010301175107/http://evolve.harvard.edu/, date HХ accessed 01-03-2005. Website of Prof. David R. Liu, publicly available 19 April 2001, HY http://web.archive.org/web/20010419064232/http://evolve.harvard.edu/, date accessed 01-03-2005. Website of Prof. David R. Liu, publicly available 23 Sept 2001, HZhttp://web.archive.org/web/20010923021615/http://evolve.harvard.edu/, date accessed 01-03-2005. Website of Prof. David R. Liu, publicly available 24 Sept. 2002, http://web.archive.org/web/20020924154032/http://evolve.harvard.edu/, date accessed 07-03-2005. Website of Prof. David R. Liu, publicly available 20 Nov 2002, TR http://web.archive.org/web/20021120104204/http://evolve.harvard.edu/, date accessed 01-03-2005. Website of Prof. David R. Liu, publicly available 15 Oct 2003, http://web.archive.org/web/20031015114255/http://evolve.harvard.edu/, date IC accessed 11-03-2005. Fredriksson et al., "Protein detection using proximity-dependent DNA ligation assays", Nature Biotechnology, Vol. 20, p 473-477, May 2002 ID Lowe et al., "Combinatorial Libraries for Studying Molecule Recognition", URL: http://www.iupac.org/symposia/proceedings/phuket97/lowe.html, downloaded in June 2005. ΙE Czarnik et al., "Encoding methods for combinatorial chemistry", Current Opinion in Chemical Biology, June 1997, vol. 1, Iss 1, p 60-66 Battersby et al., "Optical encoding of micro-beads for gene screening: alternatives to micro-arrays", Drug Discovery Today, 1 June 2001, Vol. 6, Supp 1, p 19-26 IF IG Shchepinov et al., "Trityl tags for encoding in combinatorial synthesis", Tetrahedron 56 (2000) 2713-2724 ΙH Geysen et al., "Combinatorial Compound Libraries for Drug Discovery: An Ongoing Challenge", Nature Reviews, Drug Discovery, March 2003, Vol. 2, p 222-230 II EXAMINER DATE CONSIDERED

EXAMINER: Initial if reference considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.